

Patent claims

1. A control method for controlling the gas flow by a compressor in which a volume is expanded during an intake stroke and the introduced volume of gas is compressed and taken out through a non return valve (6) for outflow and/or an operable outlet valve (3) during an evacuation stroke, and in which the compressor has a controllable inlet valve (2) that is pneumatically, hydraulically or electromagnetically operable and that is opened and closed upon basis of a signal from a control system, **characterized** in that the inlet valve (2) is kept closed during at least a part of an intake stroke.

2. A control method according to claim 1, **characterized** in that the inlet valve (2) is kept closed during the whole intake stroke.

3. A control method according to claim 1 or 2, **characterized** in that the frequency of cycles with closed intake stroke is varied between 0% and 100% of the number of revolutions per minute in order to, at the given number of revolutions per minute, deliver the amount of the compressed gas required for the moment.

4. A control method according to claim 3, **characterized** in that, between each cycle or each continuous series of cycles with closed intake strokes, an equal amount of revolutions are performed.

5. A control method according to anyone of claims 1-4, **characterized** in that the inlet valve (2) is closed upon transition, or after the transition, from intake stroke to evacuation stroke.

6. A control method according to anyone of claims 1-5, **characterized** in that the inlet of the compressor (1), besides the controllable inlet valve (2), comprises a non

return valve (13) for inflow, and that the conduit for supply of gas to the latter is throttled down or closed by means of a closure member (14) arranged by or upstream the non return valve, by controlling the gas pressure in a tank (8) associated to the compressor.

7. A control method according to claim 6, **characterized** in that the closure member (14) is a controllable valve, which is opened and closed upon basis of a signal from the control system.

8. A control method according to anyone of claims 1-7, **characterized** in that the outlet of the compressor (1), apart from a non return valve (6) for outflow, comprises a controllable outlet valve (3) which is pneumatically, hydraulically or electromagnetically operated, and which opens and closes upon basis of a signal from the control system.

9. A control method according to anyone of claims 1-8, **characterized** in that the outlet valve (3) is opened as there is a pressure balance between the gas to be evacuated and the gas on the opposite side of the outlet valve (3), the latter being controlled by means of a sensor (18) that registers the cylinder pressure that is compared to the pressure in the tank registered by another sensor (9).

10. A control method according to anyone of claims 1-9, **characterized** in that a conduit (7) that extends between the compressor (1) and the tank (8) fulfills the need of pressurized gas between the compressor and the equipment that will use the pressurized gas.

11. A control system, **characterized** in that it comprises a computer program adapted for executing the control method according to claim 1.